## AMENDMENTS TO THE CLAIMS

- 1. (Currently Amended) A polymerization process comprising
  - a. combining:

at least one chain transfer agent of formula I,

$$R^1$$
  $S$   $CN$   $R^2$ 

at least one monomer susceptible to free radical polymerization, and a free radical initiator, and;

b. generating free radicals;

wherein

R<sup>1</sup> is selected from alkyl, substituted alkyl, heteroaryl, substituted heteroaryl, alkylaryl, substituted alkylaryl, aryl, substituted aryl, alkoxy, aryloxy, thioalkyl, thioaryl, substituted thioalkyl, substituted thioaryl, secondary amino, and tertiary amino; and

 $\rm R^2$  is selected from alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, and  $\rm COOR^3$  and

R<sup>3</sup> is alkyl.

whereby a polymer, comprising repeating units derived from said at least one monomer, is formed.

- 2. (Cancelled)
- 3. (Original) A polymerization process according to claim 1, wherein R<sup>1</sup> is aryl.
- 4. (Original) A polymerization process according to claim 1, wherein R<sup>1</sup> is substituted aryl.
- 5. (Original) A polymerization process according to claim 1, wherein R<sup>1</sup> is alkoxy.

- 6. (Currently Amended) A polymerization process according to claim 1, wherein R<sup>1</sup> is secondary or tertiary amino.
- 7. (Cancelled)
- 8. (Cancelled) A polymerization process according to claim 1, wherein  $R^2$  is phenyl.
- 9. (Currently Amended) A polymerization process according to claim 1, selected from the group consisting of

10. (Original) A polymerization process according to claim 1, wherein said at least one monomer is selected from the group consisting of vinyl monomers, acrylic and methacrylic acid, acrylate and methacrylate esters, styrene, fumarates, maleic

anhydride, maleimides, and mixtures thereof.

## 11. (Currently Amended) A compound of formula II

$$R^{11}$$
  $S$   $CN$   $R^2$ 

wherein

R<sup>11</sup> is selected from alkyl, substituted alkyl, heteroaryl, substituted heteroaryl, alkylaryl, substituted alkylaryl, aryl[[[;]]] or substituted aryl, aryloxy, thioalkyl, thioaryl, substituted thioalkyl, and substituted thioaryl; and

 $R^2$  is selected from alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, and  $COOR^3$  and

R<sup>3</sup> is alkyl.

- 12. (Currently Amended) A compound according to claim 11, wherein  $R^{1\underline{1}}$  is selected from aryl and substituted aryl.
- 13. (Currently Amended) A compound according to claim 11, wherein  $R^{11}$  is aryl.
- 14. (Currently Amended) A compound according to claim 11, wherein  $R^{11}$  is substituted aryl.
- 15. (Currently Amended) A compound according to claim 11, wherein  $R^{1\underline{1}}$  is phenyl
- 16. (Cancelled)
- 17. (Original) A compound according to claim 11, wherein  $\mathbb{R}^2$  is phenyl.

18. (Currently Amended) A compound according to claim 11, selected from the group consisting of